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Work satisfaction or burnout and their impact on innovative work behavior of Greek teachers

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Abstract: Innovation is a lever for growth and prosperity in business and society as a whole. Innovations lead to the industrial revolutions which are transforming our world. Innovation is the solution to many of the side effects of industrial revolutions. We can prepare the future world citizens to face the challenges of the new world only by education. The purpose of this study was to investigate work satisfaction, work engagement, burnout and innovative work behavior of Greek teachers. From the investigation the relationships between the above concepts emerged and the demographic elements associated with them were identified. The applied statistical survey of this study was conducted from December 2018 to January 2019 and 324 primary and secondary school teachers participated in it. Survey data were collected using an online questionnaire that included demographic questions, the Oldenburg Burnout Inventory (OLBI) and a Kleysen & Street innovative behavioral questionnaire adapted to Greek reality. The results of the survey showed a very low rate of burned-out and a high rate of work-engaged teachers. Because previous surveys have reported high rates of burnout for Greek teachers, we conclude that work engagement, as well as burnout, are time dependent on environmental factors related to the socio-economic changes of recent decades. Our research results also showed that establishing and supporting innovative work behavior by leadership and co-workers has the effect of demonstrating a high level of innovative work behavior by Greek educators. In addition, it was found a fluctuation of work engagement with age and an enhancement of innovative work behavior due to post-graduate studies. Moreover, it emerged that work engagement positively correlates with innovative work behavior, creating a virtuous circle, where one feeds the other.

Keywords: work satisfaction, work engagement, burnout, innovative work behavior, education

JEL Classification: I12, I20, I28

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1 INTRODUCTION

While today we are trying to deal with effects of the 1st Industrial Revolution, such as climate change, the fast-paced 4th Industrial Revolution drastically transforms societies and the world economy. This transformation, in its scale, scope and complexity, will be unlike anything humankind has experienced before (Schwab, 2017). How will we prepare 21st century citizens to meet the challenges of the new interconnected world that emerges? One of the biggest

precariousness of the 4th Industrial Revolution is the reluctance or inability of individuals, organizations, governments and societies to adapt to the new reality it shapes (Schwab, 2017). That is why, as early as March 2000 in Lisbon, the leaders of the Member States of the European Union have decided to promote an ambitious project for Europe. The plan, known as the "Lisbon Strategy", highlights the goal of "making Europe the most competitive and knowledge-based economy in the world capable of sustaining its economic growth".

The Lisbon strategy calls for a radical transformation of the European economy while protecting the environment and upgrading social welfare and education systems. In particular, it seeks to support: (a) employment, (b) economic reform, and (c) European economic cohesion in the context of a knowledge-based economy. The aim is to "develop human capital for social cohesion and competitiveness in the knowledge society" through education and training (2003 / C 295/05, 2003).

In the framework of the Lisbon Strategy, the Education and Training 2020 program was decided and implemented with the strategic objective of encouraging creativity and innovation as well as entrepreneurship at all levels of education and training. In particular, individuals need to be helped to develop competences in the digital environment, initiative spirit, entrepreneurship and cultural consciousness. However, in which ways creativity and innovation are encouraged in the Greek educational system? In particular, what is the role of work satisfaction, engagement and exhaustion in the innovative work behavior of Greek teachers?

2 THEORETICAL FRAMEWORK

The degree to which a person is satisfied with his job is considered to be a key factor in his mental health and may affect his work performance, his commitment to the organization in which he works and his relationships with internal or external organization's clients. Consequently, in the modern world economy, mental health of workers is a key factor in the effectiveness and well-being of businesses and organizations.

Work satisfaction, work engagement and burnout are three different kinds of job-related well-being (Schaufeli, Taris, & Van Rhenen, 2008). According to Locke (1976), work satisfaction is defined as the positive emotional response of the individual to the particular work he performs, provided that his professional values are fulfilled.

In the 1990s it was proposed (Wegge, Schmidt, Parkes, & Dick, 2007) to bridge the pre-existing concept of work satisfaction with the concept of work engagement. Specifically, the definition given for work engagement was "participation, dedication and satisfaction of an employee at work". The above definition incorporates the classic notions of work satisfaction and commitment to the organization.

According to MacLeod & Clarke (2009) it is the measurement of work engagement that explains how employees behave rather than the measurement of work satisfaction. The two concepts are mutually linked, but work satisfaction does not imply exceeding a standard level of performance, which is implied by work engagement. Therefore, an employee can be satisfied without being engaged. Work satisfaction, however, is the foundation upon which work engagement can be developed.

Robinson, Perryman & Hayday (2004) realize work engagement as "a step ahead of work satisfaction". Therefore, work engagement is emerging as a new trend, with older roots and a different "brand", based on modern needs. Indeed, modern organizations need engaged workers who will give them a competitive advantage. Engaged employees

have high levels of energy, are excited and often so absorbed in their work that time goes by very quickly (Macey & Schneider, 2008). Also, instead of considering their work as demanding and stressful, they consider it as a daily challenge (Bakker, Schaufeli, Leiter, & Taris, 2008; Valachis et al., 2008; Nikolaou, 2018). These characteristics of engaged employees have a significant influence on their innovative work behavior (Guzmán, Blanco-Mesa, & Gaviria, 2016).

Since in this study we are interested in factors affecting the innovative work behavior of Greek teachers and because the concept of work satisfaction is incorporated in the concept of work engagement, we will measure the work engagement instead of the work satisfaction of Greek teachers.

By burnout, we mean a state of emotional exhaustion, which is the result of chronic stress and occurs mainly in the humanitarian and social work professions. Burnout comprises three elements: emotional exhaustion, depersonalisation, and lack of personal fulfillment (Barron & Watson, 2007; Antoniou, Ploumpi, & Ntalla, 2013; Kapiki & Tsakiridou, 2018).

According to Maslach & Leiter (1997), burnout is characterized by the exactly three opposite dimensions of work engagement. In the case of burnout, energy is converted into exhaustion, involvement into cynicism / depersonalization, and efficiency into inefficiency and mental fatigue.

In the modern globalized world, an organisation's capability to innovate is particularly important in order to gain a sustainable competitive advantage (Tidd & Bessant, 2013; Mokias, 2019). Schumpeter's (1947) observation that innovation is a lever for growth and prosperity in business and society as a whole is rarely disputed.

The concepts of innovative work behavior, innovation, invention and creativity are often used without distinction (Scott & Bruce, 1994; Sigala & Christou, 2009). The above concepts, though related, differ from one another. Creativity refers mainly to the production of useful new ideas or objects (Mumford, 2003). An invention is the first appearance of an idea, product, or process (Epstein, 2017). The invention becomes an innovation when it begins to be used. Therefore, innovation refers to the successful implementation of creativity with the potential, in some cases, of financial result (Scott & Bruce, 1994). Innovation consists of the production, assimilation and exploitation of new achievements or ideas in the economic and social field (Christou, 1999; Frankelius, 2009; Boza, 2019). More specifically, the concept of educational innovation is defined as "... any dynamic change intended to add value to the educational process and resulting in measurable outcomes in terms of stakeholders satisfaction or educational performance" (OECD / CERI), 2010).

Farr & Ford (1990) define Innovative Work Behavior (IWB) as work behavior aimed at the purposeful production and implementation - through the work role of everyone - of new and useful ideas, processes and products/services. At the employee level, the concept of innovative work behavior can be described as the behavior that one manifests when "... taking initiatives to improve the prevailing conditions or to create new ones that will disturb the status quo..." (Crant, 2000). An innovative worker seeks new opportunities, adapts to his goals in a creative way, takes proactive behavior and

creatively tackles problems that arise trying to implement alternative solutions (Bateman & Crant, 1999).

3 METHODOLOGY AND SAMPLE

The applied statistical survey of this study was conducted from December 2018 to January 2019. Survey data were collected using an online questionnaire that included demographic questions, the Oldenburg Burnout Inventory (OLBI) and a Kleysen & Street innovative behavioral questionnaire adapted to Greek reality.

The Oldenburg Burnout Inventory (OLBI) was preferred over other work engagement and burnout questionnaires, such as the Maslach Burnout Inventory (MBI) or the Utrecht Work Engagement Scale (UWES), because OLBI consists of sixteen (16) sentences, both positive and negative phrased. From a psychometric point of view, questionnaires that have positive and negative statements are considered more reliable than those that have only one type of question (Demerouti & Bakker, 2008). OLBI evaluates two dimensions of work engagement or burnout, exhaustion and disengagement (from work), because the professional efficacy dimension is considered to be a consequence of the two preceding ones.

The Kleysen & Street (2001) questionnaire was used to measure innovative work behavior, because in this questionnaire, innovative work behavior is treated as a multidimensional concept (Eaton & Christou, 1997; Lyons & Branston, 2006; Jong & Hartog, 2010; Nair & George, 2016; Fu & Kapiki, 2016; Koutsiai & Ioannidou, 2018). This questionnaire measures five (5) dimensions of innovative work behavior through five (5) closed-ended questions. This questionnaire was also adapted to estimate the support of innovative work behavior by leadership and co-workers, the implementation of innovative educational programs and the application of innovative teaching methods.

The sample consisted of 324 (25% males and 75% females) primary and secondary Greek school teachers. The participants were grouped into four age categories: the younger group (up to 30 years) represented just 5.6% of the sample, the group of teachers aged from 31 to 40 years represented 31.5% of the sample, the group of teachers aged between 41 to 50 years represented 39.8% of the sample, and the older group (51 and above) represented 23.1% of the sample. Four categories were also formed in reference to participants' studies: teachers who hold one degree (51.9% of the sample), two degree teachers (12.0% of the sample), postgraduate degree teachers (33.3% of the sample) and teachers who hold doctoral degree (2.8% of the sample). Four categories were also formed in reference to participants' years of teaching experience: up to 10 years of teaching (18.5% of the sample), 11 to 20 years of teaching (56.5% of the sample), 21 to 30 years of teaching (20.4% of the sample) and 31 and above years of teaching (4.6% of the sample).

Initially, descriptive analyses were conducted for the two work engagement or burnout dimensions and the five dimensions of innovative work behavior. Participants were then classified into three groups for each of the two work engagement or burnout dimensions. The participants were also classified into three groups (low, moderate, high) for their total innovative work behavior.

Correlations between the two work engagement dimensions and the demographics of the participants were computed. The correlations were measured with a Chi-Square test. The same test was used to measure the correlations between the overall innovative work behavior of the participants and their demographics. Finally, a Chi-Square test was run to examine the correlations between each of the two work engagement dimensions and the overall innovative work behavior.

4 RESULTS AND DISCUSSION

The first aim of the study was to assess the perceived level of burnout in Greek teachers. The descriptive analysis revealed that only 1.9% of the participants were exhausted (Table 1) and merely 0.9% of the participants experienced depersonalisation or cynicism (Table 2). Contrary, about one third of the participants were work-engaged, since 30.6% of the participants showed high energy (Table 1) and 37% of the participants were actively involved (emotionally) in their work (Table 2).

Table 1: Exhaustion/Energy dimension of work engagement or burnout

	Frequency	Percent (%)
High Energy	99	30,6
Medium Energy	219	67,6
Exhaustion	6	1,9
Total	324	100,0

Table 2: Disengagement dimension of work engagement or burnout

	Frequency	Percent (%)
Involvement	120	37,0
Neutrality	201	62,0
Depersonalisation	3	0,9
Total	324	100,0

Regarding the Greek teachers' innovative work behavior the descriptive analysis presented that 62% of the participants reported high innovative work behavior and 38% of the participants reported moderate innovative work behavior (Table 3). It is remarkable that none of the participants reported low innovative work behavior.

Table 3: Innovative Work Behavior

	Frequency	Percent (%)
Low	0	0,0
Moderate	123	38,0
High	201	62,0
Total	324	100,0

Because very few of the participants were burned-out, at Chi-Square test, the percentage of cells in the table with an

expected count less than or equal to five exceeded 20%. Hence, in order to acquire a valid p-value, the participants were classified again into two groups for each of the two work engagement dimensions. In this new classification none of the participants was considered burned-out.

Inductive analysis revealed, regarding the correlation of age with the dimension of disengagement, that at younger ages (up to 30 years) high involvement/engagement is dominant, at the following age group (31 to 40 years) neutrality prevails, next, at ages from 41 to 50 years engagement again is higher than expected and finally, at ages over 51 years the count of neutrality is higher than expected (Table 4). In addition, the p-value of 0.008 is less than 0.05, so we can say that there is a strong correlation between age and disengagement. Along with the previous dimension of work engagement, energy (the opposite of exhaustion) is higher than expected at younger ages (up to 30 years), declines at the age group of 31 to 40 years, increases once again at ages from 41 to 50 years, and finally declines yet again at ages over 51 years (Table 5). A p-value of 0.031 is less than 0.05 and demonstrates the correlation between age and energy (or exhaustion).

Table 4: Correlation of Age with the dimension of Disengagement

Age	Up to 30	Count	Disengagement		Total
			Involvement	Neutrality	
		Expected Count	9	9	18
		Expected Count	6,7	11,3	18,0
	31 - 40	Count	27	75	102
		Expected Count	37,8	64,2	102,0
	41 - 50	Count	60	69	129
		Expected Count	47,8	81,2	129,0
	51 and above	Count	24	51	75
		Expected Count	27,8	47,2	75,0
Total		Count	120	204	324

Table 5: Correlation of Age with the dimension of Energy

Age	Up to 30	Count	Energy		Total
			High Energy	Medium Energy	
		Expected Count	6	12	18
		Expected Count	5,5	12,5	18,0
	31 - 40	Count	24	78	102
		Expected Count	31,2	70,8	102,0
	41 - 50	Count	51	78	129
		Expected Count	39,4	89,6	129,0
	51 and above	Count	18	57	75
		Expected Count	22,9	52,1	75,0
Total		Count	99	225	324

With regard to the relationship between innovative work behavior and the participants' studies, it became evident that high innovative work behavior has count higher than expected at participants with more studies than their basic degree (Table 6). And since the p-value is 0.001 (less than 0.05), we can conclude that there is a significant correlation between the level of study and the innovative work behavior.

Table 6: Correlation of Studies with Innovative Work Behavior

Studies	One degree	Count	Innovative Work Behavior		Total
			Moderate	High	
		Expected Count	81	87	168
		Expected Count	63,8	104,2	168,0
	Two degrees	Count	9	30	39
		Expected Count	14,8	24,2	39,0
	Postgraduate degree	Count	30	78	108
		Expected Count	41,0	67,0	108,0
	Doctoral degree	Count	3	6	9
		Expected Count	3,4	5,6	9,0
Total		Count	123	201	324

Finally, in respect of the relationship between innovative work behavior and each of the dimensions of disengagement and exhaustion it became apparent that the count of high innovative work behavior is higher than expected in high engagement (Table 7) and high energy groups of participants (Table 8). Furthermore, since the p-value is 0.000 in both cases we conclude that there is an important correlation between work engagement and innovative work behavior.

Table 7: Correlation of Disengagement with Innovative Work Behavior

Disengagement	Involvement	Count	Innovative Work Behavior		Total
			Moderate	High	
		Expected Count	27	93	120
		Expected Count	45,6	74,4	120,0
	Neutrality	Count	96	108	204
		Expected Count	77,4	126,6	204,0
Total		Count	123	201	324

Table 8: Correlation of Energy with Innovative Work Behavior

Energy	High Energy	Count	Innovative Work Behavior		Total
			Moderate	High	
		Expected Count	21	78	99
		Expected Count	37,6	61,4	99,0
	Medium Energy	Count	102	123	225
		Expected Count	85,4	139,6	225,0
Total		Count	123	201	324

The present study revealed a very low rate of burned-out and a high rate of work-engaged teachers. Since previous surveys have reported high rates of burnout for Greek teachers, we conclude that work engagement, as well as burnout, are time dependent on environmental factors (Brouwers, Evers, & Tomic, 1999) related to the socio-economic changes of recent decades (Sennett, 1998).

Another issue worthy of discussion concerns the finding that establishing and supporting innovative work behavior by leadership and co-workers has the effect of demonstrating a high level of innovative work behavior by Greek educators. The outcome of the high level of innovative work behavior is that the overwhelming majority of our research teachers are implementing innovative programs and applying innovative teaching methods.

Concerning the role of demographic variables in teachers' perceived levels of work engagement, this study revealed that the age groups of teachers with the highest work engagement and therefore participation, dedication and job satisfaction are those of young people up to 30 years of age and those aged 41 to 50 years old. These findings can be explained by the enthusiasm and appetite for work of new teachers and the maturity of teachers from 41 to 50 years of age to focus on their work (mental commitment), to exercise it with dedication (emotional commitment) and to take a step further in order to evolve professionally (physical commitment). For teachers aged over 30 enthusiasm subsides, whereas for teachers aged over 51 maturity is overwhelmed by monotony, lack of motivation, and the fact that they still have many years of working life ahead, because of the increase in retirement age, so they resort to economy of force.

Regarding the role of demographic variables in teachers' perceived levels of innovative work behavior, our research results showed that post-graduate studies promote innovative work behavior and that is why we have seen a strong correlation of the educational level of teachers with their

innovative work behavior. Thus, innovative work behavior is an acquired property.

Finally, from this study emerged that work engagement positively correlates with innovative work behavior, creating a virtuous circle, where one feeds the other. Expectantly, this study promotes an understanding of the factors that affect work engagement and innovative work behavior. In this way, optimistically it will contribute to the development of an educational policy aiming at providing effective support to teachers in the performance of their duties, the enhancement of their professional skills and their upgrading. Consequence of this educational policy will be the "development of human capital for the purpose of social cohesion and competitiveness in the knowledge society".

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